

Illinois Energy Efficiency Stakeholder Advisory Group

2020 SAG Portfolio Planning Process
Proposed Energy Efficiency Ideas Template

Submitter Contact Information

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Energy Efficiency Idea Questions

Please check the boxes below to identify 1) the type of idea; 2) which Illinois utility or utilities will be impacted by the idea; and 3) which EE sector the idea impacts.

Check	Type of Energy Efficiency Idea
<input checked="" type="checkbox"/>	New Measure or New Program Idea
<input type="checkbox"/>	Proposed Program Approach
<input type="checkbox"/>	Innovative Idea

Check	Illinois Utility Impacted by Energy Efficiency Idea
<input checked="" type="checkbox"/>	Ameren Illinois
<input checked="" type="checkbox"/>	ComEd
<input type="checkbox"/>	Nicor Gas
<input type="checkbox"/>	Peoples Gas & North Shore Gas

<input type="checkbox"/>	All Illinois Utilities
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Check	Energy Efficiency Sector Targeted by Energy Efficiency Idea
<input checked="" type="checkbox"/>	Residential Customers – Single Family (non-income qualified/income eligible)
<input checked="" type="checkbox"/>	Residential Customers – Multifamily (non-income qualified/income eligible)
<input checked="" type="checkbox"/>	Residential Customers – Single Family Income Qualified/Income Eligible
<input checked="" type="checkbox"/>	Residential Customers – Multifamily Income Qualified/Income Eligible
<input checked="" type="checkbox"/>	Small Business Customers (commercial & industrial sector)
<input checked="" type="checkbox"/>	Medium/Large Business Customers (commercial & industrial sector)
<input type="checkbox"/>	Other (research & development, emerging technologies, market transformation)

Additional Questions

1. **Description of Idea:** Describe whether this is an idea that could be implemented in an existing EE program, or whether the idea involves establishing a new measure or program. Please indicate whether additional research may be required before implementation.
 - Elevate Energy recommends adding water saving devices recently included in the TRM to the utility portfolio of offerings. These measures include WaterSense toilets, urinals, and residential pool covers.

Volume	End Use	Measure Name
Volume 2: C&I	4.2 Food Service Equipment	4.2.20 Efficient Dipper Wells
Volume 2: C&I	4.3 Hot Water	4.3.11 Tunnel Washers
Volume 2: C&I	4.8 Miscellaneous	4.8.14 Low Flow Toilet and Urinals
Volume 2: C&I	4.8 Miscellaneous	4.8.15 Smart Irrigation Controls
Volume 3: Residential	5.4 Hot Water	5.4.10 Pool Covers
Volume 3: Residential	5.7 Miscellaneous	5.7.2 Low Flow Toilets

These products have the potential to help customers achieve significant water savings and enable electric utilities to claim additional system-wide energy savings. For example, savings per toilet are 7.5 kwh/year for single family and 6.14 kWh/year for multifamily properties.

- Elevate Energy also recommends electric utilities consider a water savings program for low income customers and/or distressed communities. Water affordability is becoming an increasingly dire issue in the United States, where the average monthly water bill has gone up by 57% in 30 major

U.S. cities since 2010¹. In Chicago alone, the cost of water services is three times higher than it was in 2007². In northeastern, Illinois, the average water rate grew by almost 80 percent from 2008 to 2018, and in 75 percent of communities, water bill growth is exceeding income growth³. Elevate Energy recommends that utilities consider piloting a low-income water savings program to help address this issue for its most vulnerable customers and/or communities. Fixing leaks and replacing toilets can save residents thousands of gallons of water every year, about 65 kWh system-wide for a WaterSense toilet replacement, and costs on utility bills. Program offerings could include water utility bill and consumption analysis, a free comprehensive water assessment, water fixture and toilet replacements, and a post-retrofit savings report. ComEd currently offers free WaterSense showerheads and faucet aerators as part of its Home Energy Assessment. To help customers save even more on water costs, consider adding toilet flappers and fill valves to the TRM, or offering dual flush kits along with TSVs to its free energy-saving direct install products package. This should be a relatively straightforward and cost-effective way to provide added benefit to customers.

An example of a water conservation program with a low-income focus is The Home Conservation Program, run by the nonprofit Project Home in partnership with Madison Water Utility. The City was finding that lower income residents could not afford the cost of a toilet installation, as the rebate only covered the cost of a toilet. This led them to partner with Project Home, who employs in-house plumbers, to access these households. Water conservation improvements are performed at the homes of low-to-moderate income Madison Water Utility customers, where high-efficiency toilets are installed, plumbing leaks are fixed, and other water saving devices such as aerators and low-flow showerheads are installed. As of last year, the Home Water Conservation Program had allowed 214 low-to-moderate income community members, at 113 area homes, to see savings in water usage and bills.

In conjunction with the low-income program, the City of Madison has also run a toilet replacement program since 2009 where customers are provided with a bill credit of up to \$100 if they replace their old toilet with one that is a WaterSense-rated High Efficiency Toilet. In 2019, the program had saved over a half billion gallons of water, or 2,825,000 kWh system-wide, and over \$2.6 million in water and sewer charges. Another example of a low-income water savings program is run in Aurora, Colorado. Aurora Water helps income-qualified customers replace old fixtures with new, high-efficiency fixtures. They partner with Mile High Youth Corps, a nonprofit that employs those aged 16 to 24, to replace up to two toilets, two showerheads and three faucet aerators with water-saving versions in income-qualified homes and non-profit buildings. This program works to create water and dollar savings for the customers who need them the most, while simultaneously providing job training and experience to youth Corps members. The water saving measures are installed in conjunction with energy efficiency measures.

Prior to designing and launching these types of programs, electric utilities may wish to consider partnering with a water or wastewater utility on a low income water efficiency program to reduce overall program costs. More research may also need to be conducted on ways to enhance water efficiency offerings in a manner that is cost effective for utilities.

- Although not a perfect fit, another type of program that has shown to be low-cost and effective at reducing water usage in many cities is a high usage or leak detection alert program. This type of program would require a close partnership with water agencies and the development of a data management process. The benefits include an opportunity for customers to learn about abnormally high-water usage and pinpoint leaks. Such a program would typically collect water usage data for households over the course of a year. After the first year, the program could automatically opt customers into a high usage alert system where notices are given if water usage exceeds a certain amount over a given time period. It could also provide customers with education on the potential

¹ <https://www.circleofblue.org/waterpricing/>

² https://www.metroplanning.org/uploads/cms/documents/mpc_water_affordability_report_web.pdf

³ https://www.metroplanning.org/uploads/cms/documents/mpc_water_affordability_report_web.pdf

reasons for high water usage and connect them with available water saving rebates. A high usage alert or leak detection program would run most accurately in regions where buildings have AMI meters, but programs have successfully run with AMR.

In Washington DC, any metered water customer can sign up for an online usage tracking account. After a household's water usage has been tracked for a full year, it will automatically receive an alert when usage is significantly higher for 4 consecutive days. Up to 4 people can receive alerts for one meter. The app has been running since 2008 and has received new features such as neighbor comparison tools and historical usage download. The app sends out 8,000-10,000 alerts per year to about 35,000 of 130,000 customers who are signed up. According to a program coordinator, the estimated cost to run the program is ¼ of a person's salary. Another example of such a program is run by San Francisco PUC. AMI meters are now in place for more than 98% of San Francisco's 178,000 water accounts, which makes the program easy to run. It began as a pilot in 2015, and then transitioned into a full program in 2017. It currently serves single family homes and 2-5 flats, but the program is working toward including larger multifamily buildings and irrigation leak detection programs. Customers receive an automatic notification when they have a continuous water usage of at least 1 cubic foot over a 3-day period. Since it is an opt-out program, all customers automatically receive notifications. Leak repair parts are also free for customer pickup.

2. **Implementation:** How will this idea be delivered to the target market? Describe marketing strategies used to reach the target market and minimize market confusion.
 - Adding water efficiency measures and water assessments to existing residential programs could be delivered in coordination with other efficiency measures.
3. **Background:** Describe where the idea originated from, including whether this idea has been successfully implemented in other jurisdictions. Provide specific background information that will help utilities and SAG participants understand the proposed idea.
 - See Question 1
4. **Idea Impact:** Provide additional information on the customer segment that will be targeted with the program idea, including how and why this idea will have a positive impact on customers participating in Illinois EE programs.
 - Adding water efficiency measures and assessments to existing residential programs would require minimal effort and would provide additional energy and water saving opportunities to customers and may result in increased customer satisfaction.
5. **Duration:** Is this idea intended to be offered for the duration of the 4-year EE Plan or as a pilot measure or program?
 - The proposed measures and ideas can be offered for the duration of the 4-year EE Plan.
6. **Estimated Budget:** Provide the total estimated budget for each program year (2022 – 2025).
 - Budget could be consistent with current multifamily program budgets but is scalable to more sizes depending on portfolio needs. As incentives would need to increase, total budget would also need to increase if continuing increased participation in terms of number of buildings is a goal.

- The San Francisco PUC estimates that a high usage or leak detection alert program that serves single family homes and 2-5 flats costs about \$250,000 to implement⁴.

7. **Estimated Participation:** Provide participation totals for each program year (i.e. number of measures installed, number of customer participants, etc.)

Participation is likely similar to current participation in terms of number of buildings, but should increase participation in terms of number of measures installed.

Sources

If any sources will be useful to Illinois utilities in reviewing ideas, please either provide links within this template or send attachment(s) to the SAG Facilitator with the Energy Efficiency Idea submittal.

Puget Sound Energy and Cascade Water Alliance's Water Efficiency Program:

<https://cascadewater.org/wp-content/uploads/2019/02/Water-Efficiency-Annual-Report-2018.pdf>

Irvine Ranch Water District's One-Stop-Shop Program (in partnership with South California Edison and SoCalGas): <https://www.irwd.com/liquid-news/irwd-wins-epa-watersense-excellence-award>

SUEZ New York and Simple Energy's Water Efficiency Rebates: <https://dailyvoice.com/new-york/clarkstown/lifestyle/suez-lowes-partner-to-promote-rockland-water-efficiency/728748/>

Pasadena Water and Power's WeDIP program (partially funded by SoCalGas ratepayers and the Metro Water District funds): <https://ww5.cityofpasadena.net/water-and-power/wedip/>

San Francisco Water Power Sewer Leak Alert Program: <https://sfwater.org/index.aspx?page=947>

Project Home and Madison Water Utility, Water Conservation Program:

<https://www.projecthomewi.org/programs/home-water-conservation-program.html>

⁴ <https://sfwater.org/index.aspx?page=523>